Thermo Electron

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

1. PRODUCT IDENTIFICATION

CHEMICAL NAME; CLASS: Potassium Hydroxide

SYNONYMS/PRODUCT: Oxygen Cell
CHEMICAL FAMILY NAME: Alkaline Metal
FORMULA: KOH

Document Number: 66

PRODUCT USE: Calibration of Monitoring and Research Equipment

SUPPLIER/MANUFACTURER'S NAME: THERMO ELECTRON
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2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	mole %	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA			
			TLV 2mg/m3	STEL	PEL 2mg/m3	STEL	IDLH	OTHER
Potassium Hydroxide	1310-58-3		The TLV and PEL listed for Potassium Hydroxide denote ceiling limits.					
			None of the trace impurities in this product contribute significantly to the hazards associated with the product. All hazard information pertinent to this product has been provided in this Material Safety Data Sheet, per the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200) and State equivalents standards.					

NE = Not Established C = Ceiling Limit

NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: Emergency responders must practice extreme caution when approaching Potassium Hydroxide releases because of the extreme fire potential.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant route of over-exposure for this product is by ingestion.

INHALATION: Due to the small volume of solution content of this product, no unusual health effects from exposure to the product are anticipated under routine circumstances of use. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. Over-exposure to Potassium Hydroxide may cause the following health effects:

ACUTE: Due to the small volume of solution content of this product, no unusual health effects from exposure to the product are anticipated under routine circumstances of use.

CHRONIC: Chronic exposure to this material can cause lung damage.

TARGET ORGANS: Eyes, Skin Respiratory system, lungs, gastrointestinal tract.

HAZARDOUS MATERIAL INFORMATION SYSTEM

HEALTH	(BLUE)	3
FLAMMABILITY	(RED)	0
REACTIVITY	(YELLOW)	2
PROTECTIVE EQUIPMENT		4

EYES | RESPIRATORY | HANDS | BODY

See Section 8

For routine industrial applications

4. FIRST-AID MEASURES

INGESTION: Call a physician. If swallowed, do not induce vomiting. If conscious, give large amounts of water. Follow with diluted vinegar, fruit juice or whites of eggs beaten with water.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes.

EYE CONTACT: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

Victim(s) who experience any adverse effect after over-exposure to this product must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to physician or other health professional with victim(s).

5. FIRE-FIGHTING MEASURES

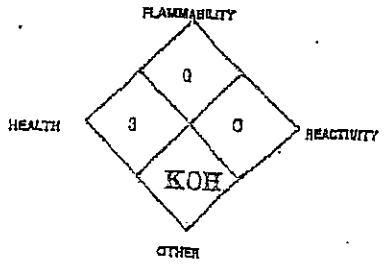
FLASH POINT; (method): Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

FLAMMABLE LIMITS (in air by volume, %):
Lower (LEL): Not applicable.
Upper (UEL): Not applicable.

FIRE EXTINGUISHING MATERIALS: Use extinguishing media appropriate for surrounding fire.

NFPA RATING



5. FIRE-FIGHTING MEASURES (Continued)

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

SPECIAL FIRE-FIGHTING PROCEDURES: None.

6. ACCIDENTAL RELEASE MEASURES

LEAK RESPONSE: Due to the small content of the cell, an accidental release of this product presents significantly less risk and other safety hazards than a similar release from a larger volume. However, as with any chemical release, extreme caution must be used during emergency response procedures. Proper protective equipment should be used. Adequate fire protection must be provided.

7. HANDLING and USE

Use safe chemical handling procedures. Wash hands after handling.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: No special ventilation systems or engineering controls are needed under normal circumstances of use. As with all chemicals, use this product in well-ventilated areas.

RESPIRATORY PROTECTION: No special respiratory protection is required under normal circumstances of use.

EYE PROTECTION: Safety glasses.

HAND PROTECTION: Proper gloves.

BODY PROTECTION: Lab coat.

9. PHYSICAL and CHEMICAL PROPERTIES

BOILING POINT: 180 °C

MELTING POINT: 360 °C

SPECIFIC GRAVITY: 1.5

SOLUBILITY IN WATER: Appreciable

EVAPORATION RATE (nBuAc = 1): 0.01

ODOR THRESHOLD: Not applicable.

pH: Not applicable.

MOLECULAR WEIGHT: 32.00

EXPANSION RATIO: Not applicable.

VAPOR PRESSURE @ 70°F (21.1°C) psig: 0.05

COEFFICIENT WATER/OIL DISTRIBUTION: Not applicable.

APPEARANCE AND COLOR: White to light yellow liquid.

HOW TO DETECT THIS SUBSTANCE (warning properties): There are no unusual warning properties associated with a release of this product.

10. STABILITY and REACTIVITY

STABILITY: Normally stable.

DECOMPOSITION PRODUCTS: Hydrogen.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong acids, strong oxidizers, chemically active metals, sulfuric acid, nitric acid, polymerization catalysts.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid contact with incompatible materials. Excessive heat.

11. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. Cells contains lead which exceeds federal TTLC standards.

12. TRANSPORTATION INFORMATION

THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME:	Potassium Hydroxide
HAZARD CLASS NUMBER and DESCRIPTION:	8 (Corrosive)
UN IDENTIFICATION NUMBER:	UN 1814
PACKING GROUP:	Not applicable.
DOT LABEL(S) REQUIRED:	Corrosive

SPECIAL SHIPPING INFORMATION: Transport in a sealed plastic bag.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

13. REGULATORY INFORMATION

SARA REPORTING REQUIREMENTS: This product is subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows:

COMPONENT	SARA 302	SARA 304	SARA 313
Potassium Hydroxide	NO	NO	NO

SARA Threshold Planning Quantity: Not applicable.

TSCA INVENTORY STATUS: Potassium Hydroxide is listed on the TSCA Inventory.

CERCLA REPORTABLE QUANTITY (RQ): YES.

PREPARED BY:

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